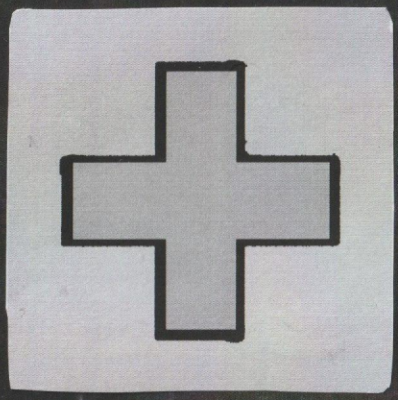
# TECH MEDIC:

# A D.I.Y.



# COMPUTER CARE ZINE

A heartfelt Thank You to wonderful friends, accomplices, and partners for helping me stay motivated and Inspire me to keep pushing.

S.O. To: Solarpunks, Mastodon friends

To those who came before.
To those who will come after.

For sustainability, for education,
For making more keys, not gates.

Taking care of your computer seems hard,
but a lot of it is treating it as a friend.
One with important parts that keep its little heart pumping.
And by doing little things sometimes, it's heart beat a little longer.

This is a guide to the little things that help our computers
within a low cost
and simple info.

The purpose of this zine
is to help things
BEFORE they break
This isn't a necromancy guide,
it's a maintenance guide ;)

In the long
its worth it to keep
an older pc or laptop for longer.

**Why things get bad quickly (sometimes you're set up to fail)**

In a lot of cheaper PCs bought by boomers
(computers and laptops found at Costco, or Walmart) The problem isn't
that the computer itself is bad, but some components won't be the best
and slows it down over time

it will also help to uninstall/deactivate features you'll never use

## THE QUESTION and some Answers.
## --Why is my computer running so slowly?!

There are a few reasons why this is happening
and if your computer is old enough (5 years or more)
the chances are high that your computer is experiencing them all at once.

1. Your computer's memory is a hard disc drive (hdd)
and running all your files AND your Operating System

2. Your computer is full of bunnies (the dust kind)

3. The thermal paste (cooling metallic goo) on your CPU is depleted

Let's break all these down and why they matter.

1:

Your computer is running all the instructions for everything you do
while running all the instructions about how to be a computer to do it.

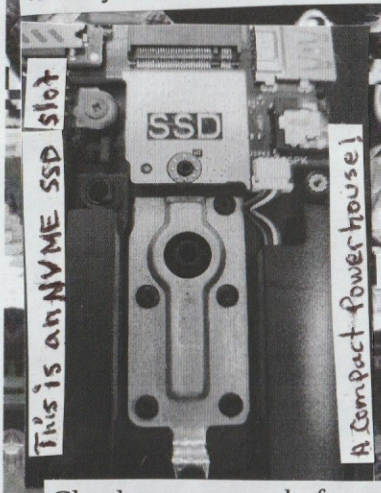
This is like if you were to open a library,
but didn't know how to run a library.
All the info you need to run the library are in the books there.

The problem is that while you are reading the
books to learn how to run a library,
people are also taking out books, interrupting you from
learning how to do the job of a library!

AHHHH!

# SolütioN

run a secondary drive as a Boot Drive. Solid State Drives (SSDs) are great because they are lightening fast, and you can buy and install a very small capacity to just run your Operating System (the library) while your hard drive takes care of the clients (apps/games).



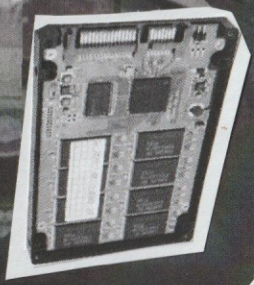

Try searching "how to migrate windows to another drive"

I prefer using an old version of MiniTool Partition Wizard Free version 10.0 (The newer versions you have to pay for)

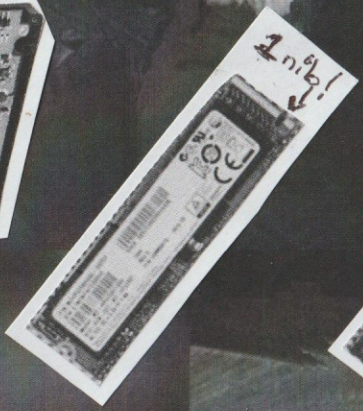
multiple how to videos will vouch for this tool and show you how use it!

Check your specs before getting one! (Info for this later)

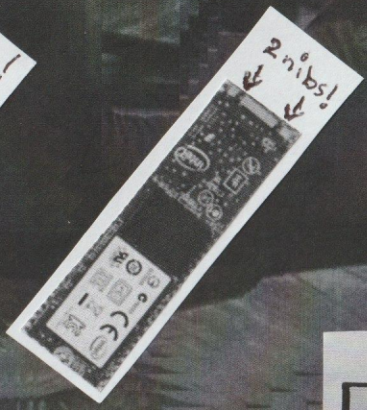
**SSD**



**NVME (M.2)**




**SATA M.2**

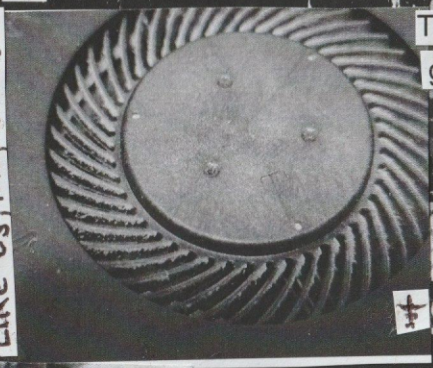


2: Have you thought about how much dust exists in your house?

To be honest I don't either until I figure out that a shelf or picture frame has a layer of it.

Your computer sucks in and pushes out air to keep itself cool, and dust get stuck in the filters

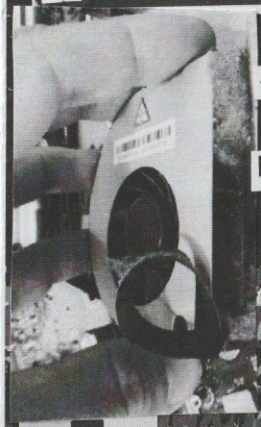
Over time your fans that push air through the computer burn out because of the dust becomes heavy.




This contributes to why your computer gets too hot, and dies.

## Solution:

- For best results (if you feel gutsy) remove your fans one by one
- Label, separate screws in a small container



You can use a small can of compressed air
- Hold your fan blades while you clean them.

**DO NOT SHAKE OR TILT THE CAN.**

For caked on dust:

lightly dip a Q tip with Isopropyl alcohol and rub clean

Change Q-tips as needed.

**3:** CPUs (the brain chip) get really hot!

So we use a metallic paste that disperses the heat to a radiator called a "heat-sink".

If your computer is older (5 Years or more) chances are high that your thermal paste needs to be replaced.

**SOLUTION!** You can buy **thermal paste** from a computer store, clean the old stuff off and apply new paste.

**Removing the heat-sink** or fan for your CPU can be easy. Look online for your CPU type, or laptop type to know more info

**REMEMBER:**
If it feels like you need brute force.
You may have missed the last screw.
Be patient, and take your time and double check.

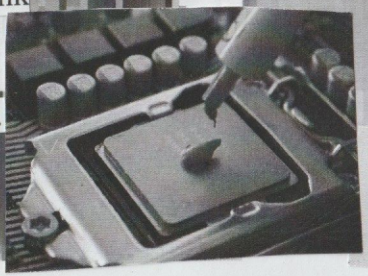
**DANGER!** Thermal paste contains **Mercury**.
**Wear gloves,** or **wash your hands afterwards.**

CONTINUE ↓

**INSTRUCTIONS**

- **Power off,** and **unplug** your computer
- **Seperate** and **label** your screws (ice cube trays are great for this!)
- Remove your heat-sink!
- clean the old thermal paste with some cotton pads and isopropyl alcohol
- Apply a bead of paste just big enough to cover the surface of CPU when it gets squished by the heat-sink

**accidentally put too much?**
Just clean it all up and try again.



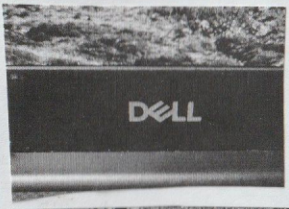
* **Wash your hands**

# GETTING DEVICE INFO

You can find out general information about your computer through your settings in "About"

**Laptops**

Try searching the name of the company (Dell, HP, Lenovo etc.)




along with some combination of numbers and letters of your model

that's your model

You can also search the company along with the service tag # printed on your laptop like this!

The service tag will appear under the barcode. Mine is 27L2FP2.

You'll find the year it was made, and all sorts of info for more things like replacement parts.

**Find out if your computer is compatible with something before buying or upgrading**

**Desktops:**

Every part in your computer is more than likely from a different company. You will usually find a mark, or sticker telling you the make, model.

# Replacement parts and UPGRADES

**When looking for new parts/ upgrades**

## Disclaimer

Computers only allow for so much growth into the future, it's a whole ecosystem that is constantly changing with new parts and newer ways of doing things in better ways, and sometimes your computer will not be ready for the newest thing out there.

With certain computers like laptops and Mac laptops, specific parts may be unable to be fixed. (or replaced!) CPUs (computer hearts), and graphic cards (math smarts for making stuff look round) are fully integrated into the main circuit board.

**RAM Explained:** RAM for a computer is the part of memory that allows you to multitask.

In older computers, RAM may be a thing that's stopping you with how fast your computer runs.

Application updates, images and video and other data is slowly taking up more space than it did before to uphold a certain kind of quality and it's usually something that companies cheap out on

Inside your laptop or desktop you'll find a sticker telling you what kind of RAM is already there so

It will help a lot to double up on RAM if you can!

If you see "DDR4" on your sticker, it means the generation of RAM. don't use other generations of RAM.

# Tips for the Road

Don't run your computer passed 75% of your hard drive space.

-If things are really bad and slow on an older computer through all the things I mentioned in this zine, maybe look into running Linux
Linux really brings older computers back to life.

Set and plan for updates.
If you don't they will be forced at bad times. (trust me)

## Dont stress. Its legos, but easier...kinda (a pep-talk)

When I first built my computer I ramped myself up so hard.
I watched the same DIY build tutorial on loop, even when I was just hanging out alone just to remember how everything was going to fit together when I finally did build my first desktop.

What I had forgotten was that not every component in a computer looks the same as any of the ones I was watching being plugged in.

Although this seems like an anxiety nightmare I'm here to help you through it!

Even if you're not necessarily building your own computer I feel like this info is important for becoming comfortable even opening your computer

All computer parts, even if they don't look the same, all have standardized connectors and ports made for that specific thing.

(All connectors have names, and finding out those names will help you a lot.)

What I'm really trying to say with all of this is....

"If it's not meant to go there. It will not fit there."

touch things.

# Fixin stuff?

**ifixit.com** is great because it has repair guides by real people and a rating system based on how repairable something is

if you are looking at something more serious like a cracked screen or fan

The guides include a list of materials and tools that you can also buy from them for a smooth repair experience.

# CONTACT:

Hope all this info has helped!
Feel free to find me on Mastodon, IG or support me on Ko-fi!
Full colour prints of the background art of this zine is in my ko-fi shop!
All links HERE!

smell ya later!

Shaughn Martel
is a New Media Artist with ADHD and Aphantasia.

# NOTES

...AND LET IT CHANGE YOU....